

body he took out the forceps, made the incision as far as the esophagus, and then reintroduced the forceps in the case of the man, but not in the baby. The prongs and edges of the plate of teeth had imbedded themselves and sepsis was beginning at a serious rate, and he found the forceps a great aid in this condition. The patient's temperature went up that night to 104°, but on the fourth day was normal.

SIGMOID DIVERTICULITIS (MESOSIGMOIDITIS) IN A CHILD.

DR. ASTLEY PASTON COOPER ASHHURST presented a boy aged seven years and nine months, whom he had seen on the evening of July 18, 1906. In the absence of Dr. Hutchinson, to whom he was indebted for the privilege of operating and of reporting the operation, he was called to the Children's Hospital to see the patient, who had just been admitted with the diagnosis of appendicitis. The patient's family history was negative; he had had measles and mumps, but not recently. For the past two weeks he had had pains in the abdomen, chiefly around the umbilicus, and not very severe until three days before admission. Then he lay on the bed, doubled up as if with cramps, but did not vomit until the day he was first seen by Dr. Ashhurst. His mother said that his bowels had been opened several times daily. The pain was said to be paroxysmal, becoming very severe at times. On admission, at 9 P.M., the temperature was 101.4° F., pulse 128, respirations 32 per minute. The abdomen was held very rigid throughout, but it seemed to be a voluntary rigidity, and there did not appear to be diffuse peritonitis. There was retention of urine, the dullness due to the distended bladder being evident on percussion in the hypogastric region. The urine was drawn twice by catheter, but subsequently was voided spontaneously.

The presence of appendicitis was excluded after the first examination, but no satisfactory diagnosis was made. Rectal examination was negative. It was decided to await the development of more certain symptoms before undertaking an exploratory operation. The bowels were opened only by enema. No purges were given at this time.

Not until the third day after admission was palpation of the abdomen entirely satisfactory. It was now possible to feel a mass in the left iliac fossa. This mass was firm and tender on

palpation, and seemed attached to the iliac bone in the neighborhood of the left sacro-iliac synchondrosis. The mass extended nearly half way from Poupart's ligament to the umbilicus. It was dull on deep percussion, and did not seem to be in close contact with the anterior abdominal wall. The rest of the abdomen was flaccid, and there was no tenderness except on firm pressure over the tumor. The tumor could not be reached by the finger in the rectum, and rectal examination was in no way painful. No polyp was detected. The question of diagnosis was still undetermined, but lay between sarcoma of the sigmoid and an inflammatory mass, which latter, it was thought, might have been caused by a previous attack of appendicitis. Psoas abscess was excluded on account of the absence of all bone lesions, and because of the presence of early symptoms of intraperitoneal irritation. Iliac abscess, of traumatic or tuberculous origin, was also excluded for the latter reason.

The child was seen by various members of the staff, both surgical and medical, but no positive diagnosis was suggested. Purges and enemata were administered until the possibility of fecal impaction was absolutely excluded. The leucocyte count was 6,400 the day after admission. One week later 7,200.

Exploratory laparotomy was done on July 27, nine days after admission. An incision, nearly three inches in length, was made in the left rectus muscle above Poupart's ligament. There was much bleeding from the abdominal wall, and the transversalis fascia and peritoneum were much thickened. On opening the peritoneum there escaped several drachms of clear serous fluid, with no odor. Its appearance suggested the possibility of a rupture of the bladder, with the extravasated urine encapsulated by adhesions. There were light inflammatory adhesions between the outer layer of the mesosigmoid, and the parietal peritoneum. A gauze pack was introduced to exclude the small intestines from the field of operation, and in doing this there was detected in the mesosigmoid a dense mass, nodular, stony, hard in places. The sigmoid with its attached mesentery was then partially delivered through the wound, the mesosigmoid turning on its attachment to the posterior abdominal wall like a door on its hinges. The tumor in the mesosigmoid was the size of a goose egg, and several enlarged lymph nodes were seen on its surface, just beneath the serous covering. The sigmoid itself was in no way

obstructed, but passed over the surface of the growth, and was normal to all appearances. No tubercles could be seen on the tumor, the sigmoid, the parietal peritoneum, or elsewhere in the field of operation. The tumor was of such cartilaginous hardness in places that it seemed impossible for it to be merely inflammatory in nature. It was thought to be a retroperitoneal sarcoma, and as its removal would have required resection of the sigmoid from the level of the iliac crest down into the true pelvis, all thought of radical operation was abandoned. One enlarged gland, close to the mesenteric border of the sigmoid, was removed from the surface of the tumor beneath the external layer of the mesosigmoid; the incision in the mesosigmoid was sutured; and the abdominal wound was closed in layers. The time of the operation was forty minutes. The convalescence was uneventful. The wound was dressed at the end of a week, the last sutures were removed three days later, and on the twelfth day the patient was allowed out of bed. He was discharged August 11, 1906. An examination of the blood, made August 1st, five days after the operation, showed that the leucocytes numbered 13,200, and that the hæmoglobin was 55 per cent. On the same day Dr. C. Y. White reported that microscopical examination of the gland removed at operation showed marked inflammatory exudate throughout its structure. No evidence of tuberculosis could be detected.

The patient was seen again in the Dispensary three weeks after operation. The wound was firmly healed, but the tumor seemed to be nearer the median line of the abdomen, and was not apparently attached to the left iliac bone as before the operation. His bowels had been opened normally, without enema or purge, twice daily since leaving the hospital. The patient's mother was informed that an inoperable tumor had been found, and a gloomy prognosis was given.

On November 17, 1906, about three months and a half after the operation, Dr. Ashhurst examined the patient at his home. He was playing around the streets, and had been in excellent health. His bowels opened normally, his appetite was good, and he never had any pain. Careful abdominal examination failed to reveal any evidences of the tumor. He had seen the child at intervals since then, and presented him to the Academy in perfect health, and without the slightest evidence of tumor.

Dr. Ashhurst said that until within the past year, very little surgical attention had been devoted to inflammatory lesions of the sigmoid and its mesocolon. During that time a large number of contributions have appeared, and the pathology and nomenclature of these affections are becoming better understood. The literature of acquired intestinal diverticula, up to 1904, has been admirably summarized by Dr. Edwin Beer of New York, and within the past year the diagnosis and treatment of inflammatory affections of the sigmoid have been discussed by Brewer, Lejars, Mayo, Monsarrat, Patel, Ries, Rosenheim, Sieur, and others. The lesions reported by these authors may be classified as follows:

1. Sigmoiditis—inflammatory hyperplasia of the walls of the sigmoid converting it into a rigid tube, and usually causing a certain amount of obstruction.

2. Perisigmoiditis—suppuration, usually localized, due in most cases to perforation of a sigmoid diverticulum. Appendicitis is still recognized as a possible cause of perisigmoiditis.¹

3. Mesosigmoiditis—which, in the patients reported by Ries, was characterized by the presence of cicatricial bands in the mesosigmoid, leading in one case to volvulus, these bands being the result of previous more or less acute inflammatory changes.

Most of the cases reported have belonged to one of the former classes, a majority probably being characterized by perisigmoid suppuration. It seems probable that in this case, described by the term mesosigmoiditis, the original lesion was a diverticulitis within the layers of the mesosigmoid. It is well known that diverticula occur in this situation, as well as on the free border of the sigmoid; and though their presence in any but adults is denied by many writers, other authorities acknowledge the existence of congenital diverticula. In none of the reported cases, however, so far as he had been able to ascertain, was the patient below the age of puberty;² and in none has there been such a marked tumor of the mesosigmoid, with so little perisigmoiditis. Dr. Deaver, however, had informed him that he had operated on a patient (an adult) in whom the patho-

¹ Perhaps the term pseudo-sigmoiditis might be employed to describe inflammatory lesion in the neighborhood of the sigmoid, caused by primary disease of the appendix, ovary, or Fallopian tube.

² Patel, in a paper published since the above was written, refers to a case in a girl of 10 years, reported by Walcha.

logical lesions considerably resembled those in the patient now reported; except that in Dr. Deaver's patient the mass in the mesosigmoid was much softer, the sigmoid itself was quite strictured, and when the bowel was opened an ulcerated spot (not a diverticulum) was found at its mesenteric attachment.

The treatment to be adopted depends very much on whether the condition is recognized as a purely inflammatory one, or whether, as in most of the earlier cases, it is considered malignant. In the latter case resection will be adopted for the operable cases; and the inoperable cases will be treated by either colostomy, enteroanastomosis, or exclusion if there is obstruction, or the abdomen will be closed, as in the present case, when no obstruction exists. If the presence of pus, or the history of early inflammatory symptoms, on which as a diagnostic point Lejars lays so much stress, make it seem probable that the condition is inflammatory, it will probably be best merely to drain the purulent focus and release such adhesions as obstruct the lumen of the sigmoid.

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DR. A. C. WOOD considers the pathology of these inflammatory lesions about the sigmoid more complex than might be supposed at first thought. They are not all secondary to diverticula; probably but a small minority are due to this cause. He has read of cases that were due to perforation of the sigmoid by foreign bodies; in one instance a pin had passed through the wall of the bowel, causing an abscess, and in another fragments of straw had in like manner perforated the bowel. Cases are reported in which the epiploic appendages were involved in these inflammatory swellings. Although the case reported by Dr. Ashhurst is the youngest he has heard of, he believes it is generally admitted

that these diverticula may be either congenital or acquired, and if congenital, there is no reason why they may not cause trouble in early life. He does not consider the explanation that the diverticula result from constipation and distention of the bowel with protrusion of pouches of mucous membrane through the muscle fibres a satisfactory one.

DR. ASTLEY P. C. ASHHURST, in closing, said that in his case the diagnosis was of course largely conjectural; he thought, however, that the mass certainly was one of enlarged glands, but he believes that if these glands had been simply tuberculous in character, which he considers a rarer condition in the mesosigmoid than the presence of diverticulum, there would have been symptoms of tuberculous disease and the course of the case would not have been so favorable. Although the condition is a rare one he sees no reason why this should not be considered a case of diverticulitis.

RADICAL CURE OF UMBILICAL HERNIA IN A CHILD WITH PRESERVATION OF THE NAVEL.

DR. ASHHURST reported the case of Thomas S., aged two and a half years, who had suffered since infancy with an umbilical hernia, which on admission was the size of an English walnut, and was easily reducible. The ring admitted the little finger. There was also a right inguinal hernia.

Having seen the suggestion that the navel be preserved in operating on children, especially boys, for the radical cure of umbilical hernia, he determined, at the risk of being thought to do a complicated operation where a simple would suffice, to attempt such an operation in this case. For the privilege of operating and of reporting the operation, he was indebted to Dr. Hodge, in whose service at the Children's Hospital the patient was treated.

The operation was done July 25, 1907. A crescentic incision was made below and surrounding the navel, down to the sheaths of the recti muscles. The flap of skin and subcutaneous fat thus outlined was dissected upwards, for an inch or more above the navel, the hernial sac being opened just beneath the umbilicus. The flap containing the navel was then turned upwards, and the sheath of the rectus muscle on each side was opened transversely at the level of the ring. The sheaths with the intervening